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09/339,159 06/24/99 KAUPPINEN

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EXAMINER

RAO, M

ART UNIT

PAPER NUMBER

1652

15

DATE MAILED:

09/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/339,159

Applicant(s)

Kauppinen et al.

Examiner

Manjunath N. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Jul 2, 2001

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-3, 9-11, 13, 20-23, and 26-29 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-3, 9-11, 13, 20-23, and 26-29 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-3, 9-11, 13, 20-23, 26-29 are still at issue and are present for examination.
2. Applicants' arguments filed on 7-2-01 paper No. 14, have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous Office actions are hereby withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 9-11, 13, 14, 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendoza et al. (World J. Microbiol. Biotechnol., 1994, Vol. 10:551-555) in view of Cuperus et al. (WO 95/35362, 12-28-1995). Claims 1-3, 9-11, 13, 14, 20-29 of the instant application are drawn to an isolated mannase enzyme obtained from a *Bacillus* sp. which has an amino acid sequence that is at least 80% identical to the amino acids 31-300 of SEQ ID NO:2, and which has an activity of at least 60% in the pH range 7.5-10, measured at 40 C and a molecular weight of 34 \pm 10 kDa. Furthermore claims are also directed to a purified form of the above enzyme and its use in cleaning compositions along with several other hydrolytic and proteolytic enzymes.

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Mendoza et al. teach the purification of a mannase from a *Bacillus* sp. which has similar characteristics as that mentioned above for the instant mannase. The reference mannase has a molecular weight of 38 kDa which is within the range of 34 ± 10 kDa. It appears to have at least 60% activity in the pH range of 7.5-10 when measured at a temperature of 40° C (see figure 4, all panels). However, the reference does not teach the amino acid sequence of the polypeptide which is an inherent characteristic of any enzyme. . Also, the reference does not teach the N-terminal amino acid sequence as that of the instant application, which would also be an inherent characteristic of the enzyme. Furthermore, since the Office does not have the facilities for examining and comparing applicants' protein with the protein of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein of the prior art does not possess the same material structural and functional characteristics of the claimed protein). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald et al.*, 205 USPQ 594. The reference also does not teach the use of mannase in a cleaning composition either by itself or as a composition including other enzymes.

Cuperus et al. teach the use of mannase and other enzymes for cleaning by making cleaning compositions. It would have been obvious to one skilled in the art at the time the invention was made to combine the teachings of Mendoza et al. who teach a mannase enzyme isolated from a *Bacillus* sp. with that of Cuperus et al. to develop a cleaning composition which has activity in a wide range of pH and temperature conditions. One skilled in the art would be

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motivated to do this in order to develop a cleaning composition that is capable of cleaning a surface under a range of conditions. One would have a reasonable expectation of success since Mendoza et al. provide a purified enzyme and Cuperus et al. teach a reliable and time-tested method of use of the enzyme.

Therefore the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art.

In response to the previous office action, applicants have traversed the above rejection arguing that the combination of Mendoza et al. in view of Cuperus et al. cannot render the claimed invention obvious as neither references teach or suggest the polypeptide of claim 1. Examiner disagrees and asserts that Mendoza et al. does teach a mannase which is a polypeptide comprising an amino acid sequence as shown in positions 31-330 of SEQ ID NO:2 or a polypeptide encoded by the DNA of SEQ ID NO:1 or an analogue of the mannase of the instant application which is at least 80% homologous its amino acid sequence. Therefore the above rejection is maintained.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

4. No claims are allowed.
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manjunath Rao whose telephone number is (703) 306-5681. The Examiner can normally be reached on M-F from 6:30 a.m. to 3:00 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, P.Achutamurthy, can be reached on


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(703) 308-3804. The fax number for Official Papers to Technology Center 1600 is (703) 305-3014. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Manjunath N. Rao
September 13, 2001


REBECCA E. PROUTY
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